Response to Bioterrorism

A new threat to the health of the United States population has emerged. For the first time in history, anthrax was used in mail attacks. The surreptitious attacks were discovered early, with leadership from HHS' Centers for Disease Control and Prevention(CDC), which alerted state and local health agencies on September 11 to be watchful.

Unlike explosives or chemical releases, an attack involving biological agents can go undetected for days. Only when individuals present themselves to physicians or clinics with symptoms does any evidence of the attack appear, and even then the initial symptoms might not be recognized and accurately diagnosed. Furthermore, those presenting themselves with symptoms could be at great distances from the original site of exposure by the time symptoms occurred.

Because the anthrax mail attack was detected in October 2001 (i.e, FY 2002), the HHS agencies' actions to protect Americans affected by those attacks, will be reported on more fully in the FY 2002 Accountability Report which covers that period. It is important to note though that HHS had already begun significant expansion of its emergency response capability in recent years. Since 1999, this has included special focus on response to any instances of bioterrorism. Funding and preparedness for bioterrorism had increased in FY 2001, even before the attacks.

This preparation did help HHS' CDC to discover the surreptitious attacks early and to alert state and local health agencies quickly in operating in this uncharted medical terrain. Prior to the fall of 2001, there was little experience, especially in the United States, with the deliberate release of biological agents to cause major disease outbreaks.

HHS has taken countermeasures to fight bioterrorism in five areas:

- *Improving the nation's public health surveillance network, to quickly detect and identify the biological agent that has been released;*
- *Strengthening the capacities for medical response, especially at the local level;*
- *Expanding the stockpile of pharmaceuticals for use if needed;*
- *Expanding research on the disease agents that might be released, rapid methods for identifying biological*

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agents, and improved treatments and vaccines; and

- *Preventing bioterrorism by regulation of the shipment of hazardous biological agents or toxins.*

The responsibility for responding to medical emergencies falls first and heaviest on local communities. Yet many of the special needs in responding to a bioterrorist attack (from the capacity to identify the problem to the availability of appropriate drugs) generally exceed the capacities of local systems. National response resources need to be prepared for use in cooperation with local and state officials and health personnel. Training for such unusual situations also needs to be developed and carried out with federal assistance. New working partnerships between public health, medical, public safety and intelligence agencies are needed.

In FY 2001, nine states and two communities received bioterrorism emergency preparedness grants from CDC for technical and program assistance for assessment, plan development, exercise support, and coordinating services. Fortunately, New York City and Washington, DC were the two communities that received the funding. Their responses in mitigating the adverse health outcomes of the attacks were shaped in some measure by the planning, preparedness, and mock events that were facilitated through the grants. The country's bioterrorism preparedness and response was also bolstered in FY 2001 by $45 million in cooperative agreements to 50 states, Guam, and four major metropolitan health departments (Chicago, Los Angeles, New York City, and Washington, DC). These grants enhanced epidemiological and surveillance capacity, as well as laboratory capacity for providing or gaining access to rapid testing for biologic and chemical agents.

As of this year, seven biologic and 120 chemical toxic substances likely to be used by terrorists can now be measured rapidly. Once these substances are detected, the news must also be communicated rapidly. The Health Alert Network which lays the foundation for a nationwide health alert system of communication of rapid and accurate information in a terrorism event, was expanded in FY 2001 to all 50 states, one territory, and four major metropolitan areas.

All of these CDC activities met or exceeded the performance targets for FY 2001. State and major health department participation targets were a total of 11 states/major health departments for the preparedness grants, 55 for epidemiological and surveillance, and 53 for laboratory capacity. These participation rates have been constant over the past two years with the exception that the laboratory capacity in states and major city laboratories increased by 10 from the FY 2000 capacity. The Health Alert Network also met its target of 55 participants for FY 2001, an increase from 40 the prior fiscal year.

In FY 2001 FDA also received funds that permitted continuing efforts to develop the necessary expertise and infrastructure to address regulatory activities related to the expeditious development and licensing of new vaccines. This will help to treat or prevent outbreaks from exposure to pathogens identified as bioterrorist agents. NIH also conducted multiple evaluations on the status and direction of biomedical research in the areas of bioterrorism prevention and treatment, and evaluated what the nation and NIH should do to support its research.

The dangers of bioterrorism will continue to be a major challenge to public health and healthcare systems. Recent events have shown how rapid response is critical in minimizing the impact of a bioterrorism agent. Tools and capacities for responding are continuing to be enhanced to meet this need.